



FRIDAY Dec 28th

# Upgrade your iMac 20" or iMac 24" aluminum (mid 2007) to 1TB Hard Drive and 4 GB RAM - DIY Guide

The following guide provides step by step instructions on how you can disassemble and upgrade your Apple iMac 20" or iMac 24" (aluminum, mid 2007) to 1 TB (terabyte) hard drive and 4 GB RAM - all by yourself, and save some serious money (I've personally saved over US \$1,000 upgrading my iMac 24" aluminum by myself), however you will need some background in electronics and relevant experience to make it happen...

## Disclaimer

You WILL need technical knowledge to upgrade your iMac hard drive by yourself - upgrading hard drive is not user serviceable part and it might void your Apple warranty. Therefore, I cannot be responsible for any damages or losses you'll potentially incur from following this guide - **proceed at your own risk!**

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## Desire for the Top of the Line iMac Aluminum (2007) for Least the Money \$\$



I wanted a brand new iMac 24" with the 2.8 GHz Core2Duo Extreme CPU, max. memory (4 GB) and lots of internal hard drive capacity (1 TB), however ordering a custom built model with such features through Apple's web site was costing an arm and a leg (\$3,449 to be exact), so I've decided to take a DIY approach, also taking into consideration my electronics background.

I've ended up ordering iMac 24" with 1 GB RAM, 320 GB HDD and 2.8 GHz Core2Duo Extreme CPU (approx. \$2,049 - the Extreme CPU was the only custom upgrade to my order). Then I've ordered 2 modules x 2 GB RAM (total 4 GB, costing me approx. \$140) and 1 TB hard drive (costing me approx \$310). My total cost for the machine and parts was ~ \$2499 - saving approx. \$950 than ordering machine with such configuration through Apple (\$3,499 retail). In addition, after the upgrade I've sold the remaining parts - 1 GB RAM module and 320 GB hard drive through eBay, hence my saving on my new iMac reached over \$ 1,000 US. Cool, eh?

RAM upgrade was a breeze, just opened up the memory bay slot, plugged in the new modules and closed it up! However, upgrading hard drive proved to be somewhat challenging, hence I wanted to share my experience with the Mac community. Good thing is that I was taking photos as I've went along with the upgrade. The result is the following upgrade guide.

Danny, 5. November 2007.

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## What You'll Need

**1) Apple iMac 20" or iMac 24" aluminum 2007** (models MA876LL, MA877LL, MA878LL): I can recommend purchasing your iMac aluminum through Amazon.com (the benefit being **no sales tax** for Internet orders - so you can save about \$100 there, plus they're extending an additional \$100 mail-in **rebate** - totaling to approx. \$200 in savings), the configuration with 320 GB hard drive (the lowest drive capacity available, because you'll anyhow upgrade the hard drive to 1 TB).

You can choose from one of the following iMac 20" and iMac 24" aluminum initial models you'd like to upgrade with 1 TB hard drive:



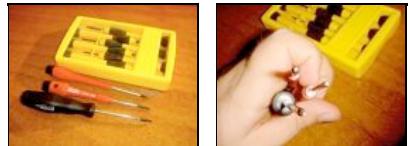
**2) 1 TB (terabyte) SATA III, 3.5" hard drive:** I've ordered mine from Amazon.com and I've chosen a Hitachi 1 Tb drive, primarily because of 32 Mb cache memory, and also due to its long-lasting life and reliability (choose a good drive - don't you just hate when the drive dies on you and you lose all your data!).

You can support this web site by ordering your upgrade hard drive from Amazon by following these banners. Thank you.



**3) Torx screwdrivers:** You'll need several specialized TORX screwdrivers, size **T4**, **T6** and **T8** (these screwdrivers are the same type used to work with mobile phones). I recommend Durston mini screwdriver set from Amazon:

[Durston Mini Screwdriver Set, Torx, ESD, T4-T10, Ergo, 7 Pcs](#)



**4) Kitchen \ bathroom hook suction cups:** In order to open your iMac, you'll need to take the glass cover off the display. The glass cover is held in place only by several magnets -- in order to remove it you'll need a specialized suction cup handle:

[Heavy-Duty Dual Head Aluminum Suction Cup Handle - 180 LB Capacity](#)

However if you don't own such a fancy tool, several kitchen \ bathroom hook suction cups will do the trick instead (as in my case :) Just make sure they're larger cups - at least 1 to 2 inches in diameter.

[Suction Cup with Hook](#)

## Upgrade Guide - Step-by-Step Instructions

[ iMac 20, iMac 24 aluminum mid 2007, models MA876LL, MA877LL, MA878LL - disassembly guide ]

### Step 1

Take a good look at your iMac - no screws (besides the memory upgrade slot) to be seen - how neat. :)))

In order to open your iMac, you will need to lift up the protective glass covering your display. The glass is held by several magnets only, so you just need to lift it up. Naturally you won't be doing this with a screwdriver beneath the glass as you will damage the frame for sure. You need suction cups to lift up the glass.

If you don't have specialized suction handle tools, using kitchen \ bathroom hook cups will do just fine. You will need about 4-6 of these, 1 to 2 inches in diameter.

Place the suction cups as shown on the photos. You might want to use a rubber string to tie up all suction cups (as shown on the photo) in order to have a grip at all suction cups simultaneously (otherwise you can try lifting up the suction cups with your bare hands ;).

Just LIFT UP the glass with the suction cups applying some moderate force. Make sure you do it carefully, as while pulling you might damage the glass!



Once you lift up the glass, put it aside on a soft cloth. Finally we can see some screws in the frame! Use your Torx screwdrivers to take out all screws within the frame. Once you're done, lift up the upper side of the frame only, but carefully, as in the upper mid section (behind the integrated iSight camera), there will be a wire you need to disconnect (as shown in photos).

### Step 2

Now make sure you take off the bracket from the memory slot at the bottom of the frame. If you don't do this, you won't be able to take off the frame.

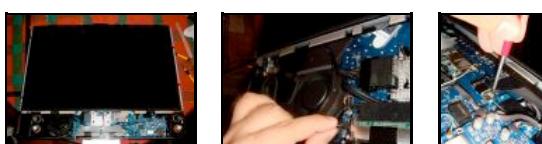


Once you've put the memory slot bracket away, you may lift up the display frame entirely and set it aside.

### Step 3

At this point we've unleashed the inside of your iMac - I truly admire Apple's compact design :) The next thing we need to do is to detach iMac's gorgeous display. Make sure you do this with utmost patience as you don't want to be responsible for any dead pixels in the process!

The display is attached with three connectors. The first two you can find on the left and the right hand side of the bottom of the motherboard. Let's start with the right-hand side connector first -- this connector is locked in with a screw - thus you need to take it off and pull out the connector. Now we move to the left-hand side connector - just unplug it carefully. You might want to use a precision screwdriver to help you out in the process.

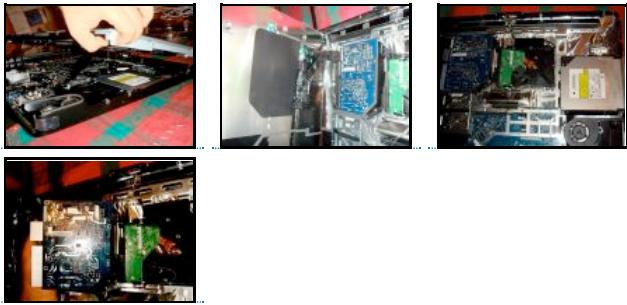




## Step 4

The third connector attaching the display is located underneath the display, in the upper left corner of it. The next step is to lift up the display VERY carefully from its right hand side and up (as shown in the picture), and you need to detach the third cable - which is a power connector connecting it to the power board (smaller blue board shown in photos).

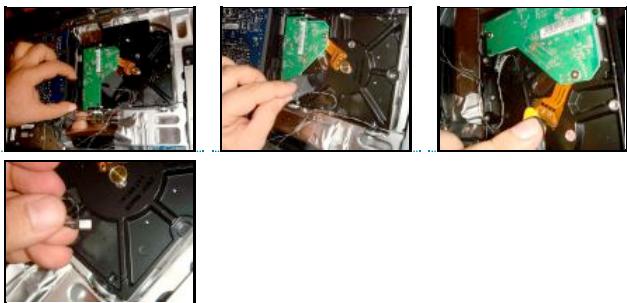
In my case, I had to take off the screw holding the power board in place first in order to be able to take off the connector. You might want a second pair of hands helping you with this step (holding the display in the air while you pull out the power connector beneath it)!



Once you detach display's power connector, you are ready to entirely lift off the display and place it aside. Make sure you put the display on a soft and safe place, away from the tools and work area (you don't want to damage it)!

## Step 5

Finally, we can see the hard drive placed in the middle upper section of iMac's aluminum back frame. In order to take out the hard drive, you must first take off the temperature sensor from the drive (as shown in photos). The temperature sensor looks like an ordinary transistor component. Make sure not to bend its pins as it may damage it! Finding a temperature sensor on your hard drive just tells you that your iMac is a well engineered machine and that Apple's engineers were thinking of every little detail (you won't find a hard drive temperature sensors in an ordinary PC).



Next, pull out the SATA and power connector from the hard drive (left hand side of the drive in my photos).

## Step 6

For this step you will need to apply a bit of force - you need to push down the plastic handle attached to the upper part of the hard drive - push down until it unlocks and lift up the drive. Alternatively, the handle is held up with two screws, so you might want to take these off and slide out the handle easily out of its place.



You can see at the photo that Apple has used Western Digital WD3200AAJS - 320 GB hard disk in its iMac aluminum (2007).

## Step 7

The hard drive side opposite to the plastic handle has two metal pins screwed in - holding the hard drive's bottom side within the frame. Take (unscrew) these pins from the original hard drive and put them onto the new hard drive. Also, move the plastic handle from the old hard drive onto the new one (held up by two screws only).

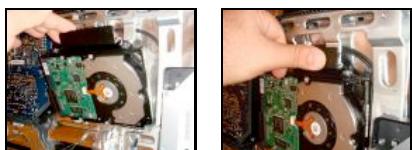


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## Step 8

Use the backward logic to put back the new hard disk in place, bottom side with pins going into the frame first, then you snap it into the place by pushing the upper side handle into the frame (as show in photos)



## Step 9

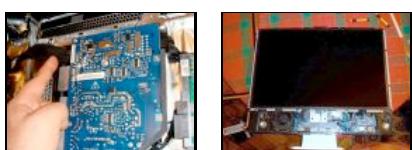
Attach the hard disk temperature sensor at approximately the same place where it was on the old hard drive. Use some glue if necessary (in my case there was enough adhesive left on the sensor, so I've just pushed it onto the drive and it stuck). Make sure you put the protective sponge on the top (as it was on the original hard drive).



Plug in the SATA and power connector to the drive (left-hand side of the drive in my photos).

## Step 10

It's time to put back the display -- we'll use the reverse logic - you need to plug in the power connector first (left hand side of the display) into the blue power board). Then place back the display firmly in its place - as shown in the photo. You might want a second pair of hands helping you with this step.



Then attach the two remaining display's connectors at the left and right hand side at the bottom of the system motherboard.

## Step 11

Put the display's aluminum frame back into its place (starting with the bottom side first), making sure you connect the integrated iSight camera wire at the top before entirely closing up the frame.



Then put all the screws you've taken out back into their places within the frame.

## Step 12

Before putting the protective glass back onto the display, you might want to wipe it off and the display itself with a soft cloth (e.g. such are cloths used to clean reading glasses) in order to get rid of the dust particles that have fallen at the display in the mean time. Please take care of what kind of cloth you use - you don't want to unnecessarily scratch your display!



You are ready to put back the protective glass on top of your display. Use suction cups to handle the glass. Make sure you put it back carefully, as magnets will snap it into the place.

## Step 13

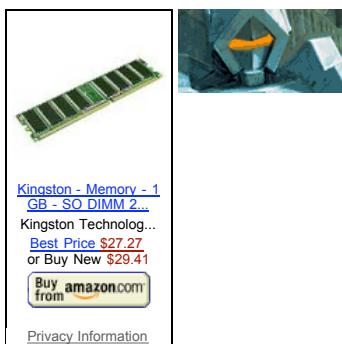
Put back the protective bracket onto the bottom memory slot (upgrading your RAM is as easy as plugging in the new memory modules into the slots).



### Upgrading the RAM

If you are to upgrade your iMac memory, I highly recommend Kingston - the appropriate modules going into iMac 20 and iMac 24 aluminum are the following:

**You can support this web site by ordering your iMac RAM from Amazon by following these banners. Thank you.**



Your iMac has two memory slots available. If you already have 1 GB RAM and would like to move to 2 GB, then just need to purchase an additional 1 GB memory module. If you'd like to upgrade to 4 GB RAM (as in my case), you need to purchase two 2 GB memory modules (also meaning your existing 1 GB memory module goes out for sale on eBay :)

## Step 14

Finally, as you've just installed a blank hard drive, you need to install an operating system on your

iMac. Please note that if you have Leopard **upgrade** DVD, you will need to install Tiger first, and then upgrade the system to Leopard.

On the other hand, if you have the full version of Leopard OS X, just go ahead and pop in the DVD, turn on your iMac and it will boot from the DVD - just follow the instructions on the screen to install the operating system.



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I'm not sure about you, but I love Leopard OS X :)

Running Windows XP in parallel with my OS X is also very important to me -- I prefer using VmWare Fusion, although some of my friends have a good experience with Parallels.

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Some of my favorite iMac publications:

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In my real life I run a software outsourcing company in Eastern Europe – modification such as one described above just shows you some of the resourcefulness we have on board. Anyone interested in outsourcing IT projects to us, please contact me using the contact link.

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napisao Fernando Leiria, December 28, 2007



Obrigado e-amigo  
Thanks a lot e-friend

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